REMARKS/ARGUMENTS

This Amendment is being filed in response to the Final Office Action of February 3, 2009. Reconsideration and allowance of the application in view of the remarks to follow are respectfully requested.

Claims 1-9 and 12-14 are pending in the Application.

Claim 8 is rejected under 35 U.S.C. §102(b) over WIPO Patent Publication WO 2000/062503 to Hardjono ("Hardjono"). Claims 1-3, 5-6, 9, 12 and 14 are rejected under 35 U.S.C. §103(a) over Hardjono in view of European Patent Publication No. 1032178 to Chen ("Chen"). Claims 4 and 13 are rejected under 35 U.S.C. §103(a) over Hardjono in view of Chen in further view of U.S. Patent Publication No. 2002/0078353 to Sandhu ("Sandhu"). Claim 7 is rejected under 35 U.S.C. §103(a) over Hardjono. The rejection of claims 1-9 and 12-14 is respectfully traversed. It is respectfully submitted that claims 1-9 and 12-14 are allowable over Hardjono alone and in view of any combination of Chen and Sandhu for at least the following reasons.

As a first point, it is undisputed that Hardjono "does not specifically teach wherein the cryptographic message integrity code is at least partly based on the target group address" as recited in

claim 8 (see, Final Office Action, page 4), yet the Final Office Action rejects claim 8 under 35 U.S.C. §102(b).

The MPEP section 2131 provides that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. The identical invention must be shown in as complete detail as contained in the claim.

Applicant submits that the Final Office Action fails to make a prima facie case of anticipation because it is undisputed that Hardjono "does not specifically teach wherein the cryptographic message integrity code is at least partly based on the target group address" as cited in claim 8. Accordingly, Hardjono does not satisfy MPEP section 2131 as an anticipatory reference. Accordingly, withdrawal of the rejection of claim 8 under 35 U.S.C. §102(b) is respectfully requested for at least this reason and for other deficiencies as discussed further herein.

Further, the Final Office Action relies on Hardjono for showing (illustrative emphasis provided) "modifying means being arranged to modify the communication fragment, by replacing the target group address by a reference referring to one of the at least two receiver devices, while maintaining the original

cryptographic message integrity code without use of a cryptographic key related to the cryptographic message integrity code", however, it is respectfully submitted that reliance on Hardjono for this feature is misplaced.

The Final Office Action interprets the appending of the router ID number of the receiving router to the message/base tag combination" as teaching "replacing the target group address by a reference referring to one of the at least two receiver devices" as recited in the claims. This interpretation is not supported by Hardjono. In fact, in Hardjono adding the ID number of the receiving router does not "replace the target group address ..." as cited in claim 8.

In Hardjono, the ID numbers of routers do not act as a target group address. In fact Hardjono teaches that the router ID numbers are merely utilized so that a receiving router can determine the path of the message from other routers up to the receiving router (see, Hardjono, page 9, lines 23-25).

It is respectfully submitted that Hardjono has little to do with the presented claimed subject matter. Hardjono shows a multicast message system wherein each router shares a cryptographic key which is utilized to indicate a multicast message. Each router

is trusted with this key thereby, creating a network of trusted routers. (See, page 3, lines 12-22 and page 9, lines 11-15.) Conversely, the present system is directed to a router wherein (emphasis added) "only the members of G [the group] (but not the router device) can read the message ..." (See, present application, page 1, line 27.) Accordingly, in the present system, the routers are not part of the trusted group in contrast with Hardjono wherein the trusted group is the routers!

In fact, Hardjono "uses tags to determine if the transmitting node is in the multicast." (See, Hardjono, page 1, lines 24-26.) As made clear by Hardjono (emphasis added) "a first tag received with the message is located and utilized to determine if the transmitting node is in the multicast. The first tag includes data associated with at least one of the receiving node and the transmitting node. A second tag then is generated if the transmitting node is determined to be in the multicast. Once generated, the second tag is transmitted with the message to a third node in the multicast. Among other things, the second tag includes data indicating that the receiving node is in the multicast." (See, Hardjono, page 1, line 27 through page 2, line 1.)

It is respectfully submitted that Hardjono does not utilize a target group address since in Hardjono, "[m]ulticast messages therefore are distributed on a per-hop basis via the parent/child nodes in the multicast" (see, Hardjono, page 6, lines 2-3). Hardjono uses tags as opposed to a target group address to indicate a multicast message (see, page 8, lines 8-12). Yet in Hardjono, tags are generated as a function of router encryption keys (see, Hardjono, page 7, lines 2-4 and page 8, lines 2-3.)

Accordingly, in contrast with what is asserted in the Final Office Action (see, Final Office Action, page 4), the addition of a router ID number of the receiving router is not a replacement of a target group address as recited in the claims.

Accordingly, it is also respectfully submitted that the router device of claim 8 is not anticipated or made obvious by the teachings of Hardjono. For example, Hardjono does not teach, disclose or suggest, a router device that amongst other patentable elements, comprises (illustrative emphasis added) "receiving means being arranged to receive the communication fragment comprising a cryptographic message integrity code that is at least partly based on the target group address [as admitted in the Final Office Action], modifying means being arranged to modify the communication

fragment, by replacing the target group address by a reference referring to one of the at least two receiver devices, while maintaining the original cryptographic message integrity code without use of a cryptographic key related to the cryptographic message integrity code" as recited in claim 8.

Based on the foregoing and that which is admitted missing from Hardjono, withdrawal of the rejection of claim 8 under 35 U.S.C. §102(b) over Hardjono is respectfully requested.

The Final Office Action interprets Hardjono's multicast ID number as "target group addresses" as recited in the claims, however, it is respectfully submitted that reliance on Hardjono for showing this feature is misplaced. As discussed above, Hardjono does not utilize target group addressing since messages are managed on a hop-by-hop bases together with an indication that a message is a multicast in a form of an encrypted tag (see, discussion above).

Hardjono makes clear that the (emphasis added) "multicast identification parameter ("multicast ID"), which is a unique number assigned to the multicast that is distributed to and stored in local memory by routers in the multicast." It is respectfully submitted that in Hardjono, the multicast ID is not a target group address as suggested in the Office Action.

Further, while Chen is relied on for showing (emphasis added) "the router device, for at least one receiver device in the target group address, replacing the first target group address with an address of the at least one receiver device forming a modified protected communication fragment" (see, Final Office Action, page 5), it is respectfully submitted that reliance on Chen for showing this feature is misplaced.

Chen shows a forwarding agent, termed a "home agent" that operates in a unicast system. The home agent modifies the original destination address to reflect a foreign address and modifies provided error checking to reflect the foreign address (see, Col. 10, paragraphs [0063]-[0064]). So while in Chen, an original home address is substituted with a foreign address, it is respectfully submitted that the original destination address is not a "target group address referring to at least two receiver devices ..." as recited in claim 1. In fact, Chen operates in a unicast environment and as such, does not utilize a group address that refers to at least two receiver devices.

Further, the Final Office Action states that "the home address [of Chen] being equivalent to the group address [of the present claims]." (See, Final Office Action, page 6.) This position is

not supportable by Chen which as stated above, is a unicast system. As stated in Chen, the "home address" is merely the mobile phones home address in the foreign network (see, Chen, Col. 12, lines 8-12 as cited in the Final Office Action).

It is further respectfully submitted that the method of claim 1 is not anticipated or made obvious by the teachings of Hardjono in view of Chen. For example, Hardjono in view of Chen does not disclose or suggest, a method that amongst other patentable elements, comprises (illustrative emphasis added) "a target group address referring to at least two receiver devices, the method comprising acts of: a sender device adding a cryptographic message integrity code to protect at least part of the communication fragment, wherein the cryptographic message integrity code is at least partly based on the target group address, the sender device transmitting the protected communication fragment to a router device, the router device, for at least one receiver device referred to in the target group address, replacing the target group address with an address of the at least one receiver device forming a modified protected communication fragment, while maintaining the unchanged cryptograph message integrity code, and subsequently forwarding the modified protected communication fragment to the at

least one receiver device, the at least one receiver device receiving the modified protected communication fragment, the at least one receiver device restoring the original protected communication fragment by replacing the address of the at least one receiver device with the target group address to allow verification of the protected communication fragment using the message integrity code" as recited in claim 1.

Regarding deficiencies Hardjono with regard to claim 7, much of these deficiencies are discussed above including the admittance in the Final Office Action that Hardjono "does not specifically teach wherein the cryptographic message integrity code is at least partly based on the target group address" as recited in claim 7 (see, Final Office Action, page 4). Further, as discussed above, Hardjono utilizes a trusted network of routers that have a secure communication channel for sharing encryption keys and as such, the router transmitters are not routers that do not have access the cryptographic keys.

It is respectfully submitted that the sender device of claim 7 is not anticipated or made obvious by the teachings of Hardjono. For example, Hardjono does not disclose or suggest, a sender device that amongst other patentable elements, comprises (illustrative

emphasis added) "protecting means being arranged to add a cryptographic message integrity code to protect at least part of the communication fragment, wherein the cryptographic message integrity code is at least partly based on the target group address and a cryptographic key, and transmitting means being arranged to transmit the communication fragment to a receiver device through a router device that is not able to modify the cryptographic message integrity code and that does not have access to the cryptographic key" as recited in claim 7.

It is also respectfully submitted that the receiver device of claim 9 is not anticipated or made obvious by the teachings of Hardjono in view of Chen. For example, Hardjono in view of Chen does not disclose or suggest, a receiver device that amongst other patentable elements, comprises (illustrative emphasis added) "a target group address referring to at least two receiver devices, the receiver device comprising: receiving means being arranged to receive the modified communication fragment, restoring means being arranged to restore the communication fragment that was used to compute a cryptographic message integrity code included in the modified communication fragment that is at least partly based on the target group address by replacing an address of the receiver

device with the target group address, and verification means being arranged to verify the cryptographic message integrity code" as recited in claim 9. As discussed above, Chen is relied on for this feature however, Chen is a unicast system and as such, does not utilize a target group address that refers to at least two receiver devices.

Sandhuis is cited for allegedly providing features of the dependent claims and as such, does nothing to cure the deficiencies of Hardjono in view of Chen.

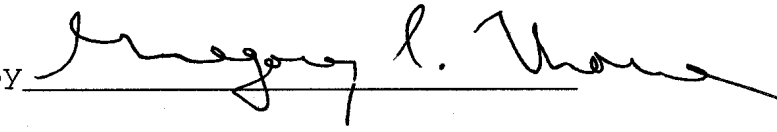
Based on the foregoing, the Applicant respectfully submits that independent claims 1, 7, 8 and 9 are patentable over Hardjono alone and view of Chen and notice to this effect is earnestly solicited. Claims 2-6 and 12-14 respectively depend from one of claims 1 and 9 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicant denies any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the

presented remarks. However, the Applicant reserves the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicant has made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

By 

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